

Amendments to the Specification:

Please add the following heading on page 1, after the title:

FIELD OF THE INVENTION

Please add the following heading on page 1, between lines 6
and 7:

BACKGROUND OF THE INVENTION

Please add the following heading on page 2, between lines 3
and 4:

SUMMARY OF THE INVENTION

Please amend the paragraph at page 2, lines 8-11, as follows:

This aim is achieved in accordance with the invention with a compressor that is driven by a motor whose speed is significantly dependant on the load torque or moment index within a given working range. Preferred embodiments will be apparent from the dependent claims.

Please insert the following heading on page 2, between lines 11 and 12:

BRIEF DESCRIPTION OF THE DRAWINGS

Please amend the paragraph at page 2, lines 18-19, as follows:

Figure 4 illustrates diagrammatically ~~the torque a~~ curve representing the relation between load torque and rotational speed (r.p.m.) of a typical compressor motor ~~as a function of its speed (r.p.m); and~~

Please insert the following heading on page 2, between lines 21 and 22:

DETAILED DESCRIPTION

Please amend the paragraphs at page 3, line 28 to page 4, line 33 as follows:

Figure 4 illustrates diagrammatically ~~a torque curve as a function of the~~ a curve representing the relation between load torque and rotational speed of an asynchronous motor. The axes are not graduated. The motor has a speed of N_4 for a load torque of M_{2A} . When the load torque of the motor increases to M_{1A} , the motor speed will drop to N_3 . The relationship with respect to this asynchronous motor is at least substantially linear in one working range of said motor. The asynchronous motor thus has ~~the~~ a property whereby a relatively large load torque increase ΔM_{κ} $\Delta M_A = (M_{1A} - M_{2A})$ leads to a relatively small reduction in motor speed.

As a result of this property of the asynchronous motor, the motor will be started when the tank pressure has fallen to the pressure P2, wherewith the compressor begins to

compress air. Because of the small increase in speed required to raise the motor load torque from M_{2A} to M_{1A} , the compressor will work at almost maximum capacity in this load torque range. This results in a rapid increase in tank pressure. A compressor driven by an asynchronous motor will thus result in a short compressor operating time in achieving the desired highest pressure in the tank T. Only a relatively small volume of air responsible in lowering the tank pressure will be consumed during this relatively short period of time. This will result in frequent starting of the motor, in order to keep the tank pressure within the desired pressure range. These moments of frequent starting and stopping of the motor will significantly shorten its useful life, for instance as a result of overheating of the motor windings.

~~Similar~~ Similarly to figure 4, figure 5 illustrates diagrammatically a ~~torque curve as a function of~~ representing the relation between load torque and rotational motor speed. The illustrated curve of figure 5 relates to a commutator motor. The axes shown in figure 5 are not graduated. The load torques M_{1k} and M_{2k} in figure 5 correspond to the load torques M_{1A} and M_{2A} in figure 4. The commutator motor has a speed of ~~N_2 in respect of N_2 for a~~ load torque M_{2K} . When the load torque of said motor has

increased to M_{1K} , the rpm of the motor will have fallen to N_1 . This relationship is at least substantially linear for the commutator in the working range. In the case of this motor, a relatively large increase in load torque $\Delta M_K = (M_{1A} - M_{2A}) (M_{1K} - M_{2K})$ will result in a relatively large reduction in motor speed.

As a result of this property of the commutator motor the tank pressure will have fallen to P_{2K} when the motor is started (see fig. 3) wherewith the compressor begins to compress air. Due to the significant increase in rpm, $[[.]]$ or motor speed, necessary for increasing the motor load torque from M_{2K} to M_{1K} , it is necessary for the compressor to work over a significantly longer period of time to achieve maximum pressure than that required by an asynchronous motor. This means that it will take far longer to achieve a tank pressure P_1 when the compressor is driven by a commutator motor. During this longer compressor working time the volume of air consumed is much greater than when a compressor is driven by an asynchronous motor, with which the maximum tank pressure is reached much more quickly. Thus, the number of starts involved when using a commutator motor is far less than the number of starts involved when driving the same compressor with an asynchronous motor in order to maintain the tank T pressurised.